REMARKS

Favorable reconsideration and allowance of this application are requested.

1. Discussion of Claim Amendments

Independent claim 1 has been revised so as to clarify that the source of anions contains a carboxylic acid as disclosed at page 7, lines 28-29, for example. In addition, claim 1 has been revised so as to include therein the subject matter of claim 11 (and as supported by page 13, lines 11-13 of the specification). As such, claim 11 has been cancelled.

Claim 1 has also been reordered for purposes of clarity and to economize language with respect to the definition of the "process ligand" (e.g., by deleting language that is superfluous in light of the Markush grouping). Claim 9 has been clarified to the extent that the second ligand is introduced in an amount sufficient to make-up the consumption amount of the process ligand.

Therefore, following entry of this amendment claims 1-9, 12-15 and 17-21 will remain pending herein for which favorable action on the merits is solicited.

2. Response to 35 USC §112 Rejection

The amendment to claim 1 so as to clarify that the source of anions contains a carboxylic acid provides antecedent basis for the language of claim 20 and thus renders moot the rejection advanced thereagainst under 35 USC §112, second paragraph.

Applicants suggest that the Examiner's comments in paragraph 5 are misplaced. While applicants noted in the prior amendment that "only" *mono*carbonylated products are obtained (emphasis added), such a statement needs to be reviewed in light of the scope of the pending claims vis-à-vis the disclosure. Thus, while applicants' arguments may be directed to certain preferred forms and/or embodiments of the disclosed

invention, such arguments do not in any way evidence that the applicants have somehow failed to define what applicants regard as their invention contrary to 35 USC §112, second paragraph. Stated more simply, the issue here is the scope of protection to be afforded by the claims and not one of statutory indefiniteness. As such, withdrawal of the rejection advanced against claim 1 under 35 USC §112, second paragraph is in order.

3. Response to 35 USC §103(a) Rejection

The Examiner has now advanced a new set of rejections under 35 USC §103(a) based on the newly cited Drent 3 reference (USP 6,737,542) in view of the previously cited Drent 1 reference (WO 02/26690).

In essence, the Examiner seems to be of the opinion that Drent 3 discloses a "mixture" of ligands in a process for the carbonylation of a 1,3-butadiene. The Examiner then concludes that reference to such a "mixture" means the use of two or more of the phosphorous ligands disclosed therein. Moreover, the Examiner asserts that the present applicants' selection of the second phosphine ligand is "…arbitrary and does not preclude the second phosphine ligand from being one of the listed process ligand (sic) (b)." As will become evident from the discussion which follows, the Examiner's interpretation of the applied reference publications is factually in error which has in turn given rise to a legally erroneous conclusion of "obviousness" under 35 USC §103(a).

Applicants note that the Examiner's reliance upon Drent 3 as disclosing "mixtures" of the disclosed ligands is misplaced and factually erroneous. In this regard, it is true that Drent 3 refers to "mixtures" in column 4. However, it is equally true that reference to such mixtures is to ***similar*** ligands that are ***incapable*** of reversibly forming phosphonium salts under carbonylation conditions. Therefore, combining any two of the ligands mentioned in column 4 of Drent 3 to provide the suggested "mixture" will ***not*** provide a result commensurate with that obtained by the process of the presently

claimed invention since in such case there would be no second phosphine ligand with less coordination strength to palladium that would be present (i.e., with so much lower coordination strength that reversibly forming phosphonium slats under carbonylation conditions would occur) with the first process ligand.

The Examiner's statement that applicants"…selection of the second phosphine ligand is arbitrary and does not preclude the second ligand from being one of the listed process ligand (b)" is incorrect. Ligands as used as the "second ligand" in the process of the presently claimed invention must be ***different from the process ligand*** (namely, reversible versus non-reversible). Neither Drent 1 nor Drent 3 provide any clues as to stability of the ligands and thereby do not suggest at all the use of ***different*** reversible and non-reversible ligands (i.e., as make-up and process ligands, respectively).

Applicants are quite perplexed by the Examiner's assertion in paragraph 15 on page 7 of the Official Action regarding an alleged "admission" by the applicants that "certain members of this group", and as taught by Drent 1, would result in phosphonium salts that are not reversible to the starting materials and decompose (implying that reversibility of the phosphonium salts formed from "bis(9-phosphabicyclononyl)alkane" is an inherent feature of that group). Again the Examiner's assertion is factually wrong. To be perfectly clear "bis(9-phosphabicyclononyl)alkane" ligands are non-reversible. They may decompose if used in high amounts but this is certainly not suggestive of "reversibility". According to the present invention, two ***different groups*** of ligands are required (i.e., a reversible ligand as a make-up ligand and a non-reversible ligand as a process ligand).

The group of ligands required by the presently claimed invention to be employed as ***reversible make-up ligands*** are nowhere taught or suggested by Drent 3. More specifically according to the presently claimed invention, a process ligand (which indeed may decompose if used in high amounts but is nonetheless non-reversible) and ***a***

ligand reversibly forming phosphonium salts under carbonylation conditions are used. That is, the art is devoid of any teaching or suggestion whereby a reversible ligand as a make-up ligand ***and*** a non-reversible ligand as a process ligand are employed in a process for the carbonylation of a conjugated diene.

Neither Drent 1 nor Drent 3 alone or in combination with one another discloses that non-reversible and reversible ligands are employed collectively in a process for the carbonylation of conjugated dienes. As such, withdrawal of the rejection advanced under 35 USC §103(a) and early passage of this application to allowance are in order.

4. Fee Authorization

The Commissioner is hereby authorized to charge any deficiency, or credit any overpayment, in the fee(s) filed, or asserted to be filed, or which should have been filed herewith (or with any paper hereafter filed in this application by this firm) to our Account No. 14-1140.

Respectfully submitted,

NIXON & VANDERHYE P.C.

By: /Bryan H. Davidson/
Bryan H. Davidson
Reg. No. 30,251

BHD:dlb
901 North Glebe Road, 11th Floor
Arlington, VA 22203-1808
Telephone: (703) 816-4000
Facsimile: (703) 816-4100